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ABSTRACT

The report describes the initial development of the Air Force Occupational Attitude Inventory. From a selective review of studies that ascribed to a multi-faceted approach, several categories or content areas were identified. An extensive item pool was prepared and reviewed by judges to provide information regarding item-category agreement, item ambiguity, and item redundancy. The revised version of the inventory consisted of 348 items distributed across 35 facets. An eight-point bi-polar rating scale without a neutral point was developed for rating the items. Details regarding the final version of the inventory booklet, suitable for administration to airmen, are provided. The entire listing of 348 items and descriptions of the 35 categories are included in the report for possible use of other researchers. Subsequent actions and future uses of the Occupational Attitude Inventory are discussed. Fifteen pages of the report consist of supplementary appendixes. (Author)

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DIMENSIONS OF JOB SATISFACTION:
INITIAL DEVELOPMENT OF THE AIR FORCE OCCUPATIONAL ATTITUDE INVENTORY

By

Thomas C. Tuttle
R. Bruce Gould
Joe T. Hazel

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Occupational and Manpower Research Division

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This report describes the initial development of the Air Force Occupational Attitude Inventory. From a selective review of studies that ascribed to a multi-faceted approach, several categories or content areas were identified. An extensive item pool was prepared and reviewed by judges to provide information regarding item-category agreement, item ambiguity, and item redundancy. The revised version of the inventory consisted of 348 items distributed across 35 facets. An 8-point bi-polar rating scale without a neutral point was developed for rating the items. Details regarding the final version of the inventory booklet, suitable for administration to airmen, are provided. The entire listing of 348 items and descriptions of the 35 categories are included in the report for possible use of other researchers. Subsequent actions and future uses of the Occupational Attitude Inventory are discussed.

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SUMMARY

A comprehensive job satisfaction research program has been undertaken by the Air Force: (1) to identify the important facets of job satisfaction, (2) to examine relationships between job satisfaction and career decisions, (3) to identify characteristics of jobs and assignments which produce satisfaction and dissatisfaction, and (4) to make recommendations for job and policy changes which will positively influence satisfaction with Air Force jobs. An essential requirement for this program is an inventory measuring all relevant attitudes toward the Air Force work environment.

The purpose of this report is to describe the rationale and procedures followed in the development of the Air Force occupational attitude inventory (OAI). It includes: (1) a selected review of previously developed job satisfaction measuring instruments that attempted to measure various facets of job satisfaction, (2) a description of the rationale and methodology employed in the development of the OAI, (3) a discussion of work planned in the future development and validation of the OAI and its role in the overall Air Force satisfaction research program, and (4) appendices which present definitions of 37 facets of job satisfaction (later modified and reduced to 35), the 348 items comprising the OAI, and the sorting of items into the 35 defined facets.

The first stage of the OAI development involved a review of existing job satisfaction measures to develop a list of previously identified facets of job satisfaction. After completion of the review the stages in the inventory development were: (1) tenative selection and definition of facets of job satisfaction, (2) constructing an item pool within each of the defined facets, (3) sorting of items into facets by six independent judges, (4) analysis of sorting data to determine item ambiguity and overlap of facets, (5) item and facet revision, (6) definition of the job satisfaction rating scale, and (7) preparation of the final survey booklet. Each of these stages is described in detail.

A discussion is also provided of in-progress and future development of the OAI, which will involve analyzing the responses of a large representative sample of Air Force personnel. One of the main purposes of that analysis will be to eliminate redundant items from the inventory. Procedures for accomplishing this objective are discussed briefly. The final section of the report describes how the OAI is expected to contribute to the accomplishment of the four goals of the overall job satisfaction research stated previously.

PREFACE

This research was completed under Project 7734, Development of Methods for Describing, Evaluating, and Structuring Air Force Occupations; Work Unit 77340501, Impact of Work Related Factors on Job Satisfaction and Career Decisions.

One of the first objectives of the work unit was to develop an OAI covering the job satisfaction domain of airmen. Subsequent work unit objectives are contingent on development of the inventory. Because of the complexity of developing an operational inventory, the efforts have been divided into phases and separate reports will cover each phase of the "Measurement of Job Satisfaction." This report describes initial development of the measurement instrument. Subsequent reports will describe the development of an operational instrument and validation phases. The first listed author initiated the study while assigned to the Occupational Research Division (AFHRL). He is currently affiliated with Westinghouse Behavioral Safety Center, Columbia, Maryland 21044. The other authors continued the research and preparation of this manuscript.

Appreciation is expressed to Dr. Raymond E. Christal for his insight and assistance in surmounting the many obstacles encountered in developing the overall strategy of this investigation. In addition to two of the authors, the other item judges who provided assistance were Mr. William Stacy, MSgt. Harold Gorski, SSgt. R.E. Ulmer, and SSgt. David Wood. Ms. Donna J. Wiechecki and Mrs. Helen Widner in their typically excellent fashion typed the manuscript, and Mrs. Joyce Georgia proofed the manuscript, as well as provided administrative support during the initial development stages.

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DIMENSIONS OF JOB SATISFACTION: INITIAL DEVELOPMENT OF THE AIR FORCE OCCUPATIONAL ATTITUDE INVENTORY

I. PURPOSE AND PERSPECTIVE

The establishment of an all volunteer force has prompted increased attention to the needs, desires, and attitudes of military personnel. To meet this situation, the Air Force initiated a comprehensive job satisfaction research program with the following goals: *(a)* to determine the important facets of job satisfaction for Air Force personnel, *(b)* to examine the relationship between job satisfaction and career decisions, *(c)* to identify the characteristics of jobs and assignments which produce satisfaction and dissatisfaction, and finally, *(d)* to recommend job and policy changes which will positively affect job satisfaction.

A previous report (Tuttle & Hazel, 1974) reviewed various theories of work motivation and drew implications from the theories for the Air Force satisfaction research program. One recommendation of the report was that a measure of job satisfaction appropriate for use with Air Force personnel be developed. The report suggested that the satisfaction measure should cover all aspects of the Air Force work environment and thus be applicable for use with all Air Force enlisted specialties. The inventory could then be used universally for airmen to measure the central satisfaction variables in the continuing job satisfaction research program. Such a measuring instrument is essential to the accomplishment of the goals stated previously.

This report describes the initial efforts undertaken to accomplish the goal of identifying important facets of job satisfaction for Air Force personnel. The systematic development of a procedure to assess the dimensions or facets of job satisfaction in the Air Force was recognized as a large undertaking, which appeared to be best approached in sequential stages.

The first step involved adopting a definition of job satisfaction for use throughout the study. The second step involved a selective review of previously developed job satisfaction measuring devices. Once these steps had been accomplished actual development of the Air Force occupational attitude inventory (OAI) began. The steps required for the development phase were: (1) definition of attitude content areas, (2) writing, review, and revision of attitude items, and (3) definition of a rating scale.

The initial development of an Air Force occupational attitude inventory involved the preparation and examination of a large number of specific attitudinal items or questions. Thus, another purpose served by this report is to make available to other users such an extensive listing. The complete item pool developed is incorporated into the present report so that investigators concerned with the measurement of satisfaction, career intentions, and motivation of job incumbents will have access to a comprehensive accumulation of attitudinal items relevant to various work groups or environments.

The final section of the report discusses plans for administration and further development of the OAI. Also discussed are the planned uses of the OAI in the long-range program to accomplish goals b, c, and d (first paragraph, this section).

II. DEFINITION OF JOB SATISFACTION

The definitional and measurement problems associated with the concept(s) of job satisfaction have probably been the two most recurrent and difficult obstacles plaguing researchers since the beginning of such research about 40 years ago. Before describing a conceptual definition of job satisfaction and a review of its measurement, a bit of retrospection on these matters seems worthwhile to place the current effort in better perspective.

In one of the first texts dealing with job satisfaction, Hoppock (1935) gave the following reply to the question "What is Job Satisfaction?"

"As an independent variable, *job* satisfaction may not even exist . . . (however) . . . whatever satisfaction is, we seem to derive it from a variety of circumstances; . . . whether satisfaction proves in the end to be general or specific, we shall probably find that work has something to do with it . . . From a technical point of view, of course, . . . job satisfaction is whatever our criterion measures; but as a more useful tentative definition we would suggest that the thing in which we are interested is *any combination of psy-*

chological, physiological, and environmental circumstances that causes a person to truthfully say, 'I am satisfied with my job.'" (Hoppock, 1935, p. 47.)

The significance of Hoppock's (1935) remarks for present purposes was his recognition of the complexity or many potential variables in job satisfaction, and that satisfaction measurement can be at a general or specific level. Thus historically, two conceptual frameworks have been recognized. The first and probably earlier view implies the existence of an overall dimension of job satisfaction or in terms of factor analysis, a general job attitude factor. An alternate view is that there is not a unique overall satisfaction variable, but rather that such an attitude exists only with regard to specific components of the work situation (Hinrichs, 1968).

A review of research over the past several decades suggests there has been a tendency to closely connect the definition and method of measurement of job satisfaction from one or the other of these two viewpoints. Depending on which approach was used, different outcomes were possible. During recent years (i.e., in the 1950's and 1960's, and concurrent with increased use of factor analysis), there appears to be a trend to recognize and favor the view that job satisfaction is multi-dimensional, with a concomitant tendency to measure satisfaction at more specific levels. Along with this more recent trend, attention has been directed towards the relation of the more specific factors to overall satisfaction and ways of combining the various aspects into more global measures of satisfaction.

With regard to labels, the terms morale, job satisfaction, and occupational attitudes have all been used to describe the reactions of individuals to their work environments. A number of attempts have been made to sort through the verbal jungle and clarify the concepts involved (Guion, 1958; Evans, 1969; Locke, 1969; Schwab & Cummings, 1970). One of the more recent and comprehensive efforts in this regard by Wanous and Lawler (1972) stated nine different definitions of overall satisfaction which had, either implicitly or explicitly, been assumed by various research studies. Wanous and Lawler (1972) concluded, however, that it is possible to validly measure job-facet satisfaction and that future research would perhaps benefit most by looking at differential relationships between satisfaction with job facets and other variables. A similar conclusion is implicit in studies associated with the Theory of Work Adjustment (Weiss, Dawis, England, & Lofquist, 1967) in that satisfaction with each of the 20 facets measured by the Minnesota Satisfaction Questionnaire (1959) is the primary concern rather than the overall satisfaction score.

The present approach, then, assumes that satisfaction is a multi-dimensional concept. Further, it assumes, following the Theory of Work Adjustment (Dawis, Lofquist, & Weiss, 1968), that satisfaction with a particular facet of the job is a function of the extent to which the expectations and needs of the worker regarding that facet are fulfilled by the work environment. To the extent that the individual does not obtain fulfillment, dissatisfaction will be produced, and to the extent that his needs and expectations are fulfilled, satisfaction will result.

In the present framework each facet can be considered as an entity in itself and no effort is devoted to the question of how to combine the separate facet satisfactions to obtain an overall satisfaction score. Therefore, the question of primary importance in this study is one regarding which of the facets should be measured.

III. MEASUREMENT OF JOB SATISFACTION - A SELECTIVE REVIEW

In order to determine the important facets of job satisfaction for Air Force personnel, a review of previously developed job satisfaction measuring instruments was conducted. This review was selective in that it emphasized instruments developed for use in more than one situation or study and it emphasized those studies which accented the notion that satisfaction is a multi-faceted concept. Additionally, from a practical viewpoint, to have attempted to cover all the ad hoc satisfaction surveys, inventories, and questionnaires developed over the past forty years would have been an undertaking of immense proportion and of dubious utility. Beginning with one of the first job satisfaction or attitude scales developed by Hoppock (1935), and using the series of reviews in *Occupations* and the *Personnel and Guidance Journal* (Pallone, Rickard, & Hurley, 1970) as a guideline, the number of studies concerned with measurement represents a large percentage of the entire area of job satisfaction research.

One of the earliest inventories designed to measure facets of satisfaction as opposed to overall satisfaction was the Science Research Associates (SRA) employee inventory (Ash, 1954). This inventory yielded 14 category scores (i.e., scales which measured different aspects of morale) which are listed in Table 1.

Table 1. Attitude Scales on the SRA Employee Inventory

Job Demands
Working Conditions
Pay
Employee Benefits
Friendliness and Cooperation of Fellow Employees
Supervisor - Employee Interpersonal Relations
Confidence in Management
Technical Competence of Supervision
Effectiveness of Administration
Adequacy of Communication
Security of Job and Work Relations
Status and Recognition
Identification with Company
Opportunity for Growth and Advancement

In two separate factor analyses of the items in the SRA inventory, Ash (1954) identified four factors which were common to both analyses and other factors unique to each of the two separate analyses. The four common factors were labeled as: Integration in Organization; Intrinsic Job Satisfaction; Immediate Supervision; and Friendliness and Cooperation of Fellow Employees. Ash's (1954) interpretation was later challenged by Wherry (1954). Using an orthogonal rotation, Wherry (1954) found a strong general factor and four group factors. The group factors were labeled: Working Conditions and Environment; Financial Reward; Supervision; and Effective Management and Administration. In a later article Wherry (1958) summarized the results of four factor analyses, one of which was the Ash (1954) study of the SRA employee inventory. He concluded that all yielded a general factor and five group factors: Working Conditions, Financial Reward, Supervision, Management, and Personnel Development.

Another inventory was developed by Johnson (1955) to measure nine facets of worker attitudes. This inventory included 99 attitude items grouped under the categories (i.e., work areas) listed in Table 2.

Table 2. Work Areas in the Job Satisfaction Questionnaire

Physical and Mental Exertion
Relations with Associates
Relations with Employer
Security, Advancement, and Finances
Interest In, Liking For, and Emotional Involvement in the Job
Job Information and Status
Physical Surroundings and Work Conditions
Future, Goals, and Progress Toward Goals
Evaluation in Retrospect

The categories selected by Johnson (1955) were based on a review of the literature. While the 99 specific items were not subsequently factor analyzed, judgments were obtained regarding the importance of the work categories to job satisfaction.

Again employing factor analysis techniques, Roach (1958) and Hinrichs (1968) attempted to identify factors of occupational attitudes. Roach (1958) administered 62 items to 2,072 employees and factor analyzed the resulting item intercorrelations. He obtained 12 factors (Table 3), including a general

factor and a subgeneral factor which he labeled general attitude toward supervision. The Hinrich's (1968) inventory contained 250 items and was administered to a large diverse industrial population. The population was split into five groups and a separate factor analysis was conducted for each group. Nine factors were obtained for each of the five groups. These factors were labeled as shown in Table 4.

Table 3. Factors from the dimensions of Employee Morale Survey[a]

Setting up and Enforcing Job Standards
Consideration of Immediate Supervisors
Satisfaction with Work Load and Pressure
Satisfaction with the Interest in and Treatment of Individuals
Pride in the Company
Salary Administration
Communications
Intrinsic Job Satisfaction
Development and Progress
Co-workers

[a]The 10 group factor numbers are as given by Roach (1958), with numbers for the two generalized factors omitted. Above titles were preceded by "Satisfaction with" . . . , except for Communications and Co-workers.

Table 4. Factors Obtained from a General Job Attitude Questionnaire[a]

Work Itself
Work Demands
Immediate Manager
Pay
Future Opportunities
Company in General
Work Associates
Work Obstacles
Job Security/Anxiety

[a]Labels as given by Hinrichs (1968).

In a series of studies beginning in 1961, Porter (1961) studied factors relating to the satisfaction of managers. Based on the Maslow (1943) hierarchy of needs, Porter measured the actual availability and desired availability of 15 reward dimensions. He derived a "satisfaction" index from this data by obtaining the deficiency between actual and desired outcomes. The dimensions measured by Porter (1961) are listed in Table 5. The dimensions are ordered in terms of Maslow's (1943) hierarchy or categories of needs, and for brevity, only the key elements are provided.

Table 5. Specific Need Satisfaction Items in the Porter Questionnaire[a]

Security
Opportunity to Help Others
Opportunity to Develop Close Friendships
Self-esteem
Prestige Inside the Company
Prestige Outside the Company
Authority
Opportunity for Independent Thought and Action
Opportunity for Participation in the Setting of Goals
Opportunity for Participation in Determination of Methods and Procedures
Personal Growth and Development
Self Fulfillment
Worthwhile Accomplishment
Pay[a]
Being in-the-Know[a]

[a]These two dimensions were specific (i.e., belong) to two or more of Maslow's (1943) need categories.

Perhaps the most researched inventory of job satisfaction has been the job description index (JDI), (Smith, Kendall, & Hulin, 1969). An extensive program of research has been conducted in the course of development of the JDI. Much of this research is discussed by Smith et al., (1969). The five areas of satisfaction measured by the JDI are as follows: *(a)* The Work Itself, *(b)* Supervision, *(c)* Co-workers, *(d)* Pay, and *(e)* Opportunities for Promotion on the Job. These dimensions were selected from a review of the previous job satisfaction research. Smith et al., (1969) acknowledged that there are also other dimensions which are important, however these five are the ones which have most consistently been found in studies designed to identify the dimensions of job satisfaction.

Although the JDI has become one of the more widely known and used devices, another inventory with a substantial research program to support it has been developed by the Work Adjustment Project at the University of Minnesota. This inventory, the Minnesota Satisfaction Questionnaire (MSQ), developed by Weiss, Dawis, England, and Lofquist, (1967), contains 100 items and yields scores on 20 aspects of satisfaction and an overall satisfaction score. In addition there is a short form of the MSQ with 20 items which yields three satisfaction scores; intrinsic, extrinsic, and overall. The MSQ is one of a family of measures developed to operationalize the Theory of Work Adjustment (Weiss, Dawis, Lofquist, & England, 1966). The 20 dimensions measured by the 100 item MSQ appear in Table 6 with an item representative of each dimension.

Table 6. Dimensions with Representative Items of the Minnesota Satisfaction Questionnaire

Ability utilization. The chance to do something that makes use of my abilities.
Achievement. The feeling of accomplishment I get from the job.
Activity. Being able to keep busy all the time.
Advancement. The chances for advancement on this job.
Authority. The chance to tell other people what to do.
Company policies and practices. The way company policies are put into practice.
Compensation. My pay and the amount of work I do.
Co-workers. The way my co-workers get along with each other.
Creativity. The chance to try my own methods of doing the job.
Independence. The chance to work alone on the job.
Moral values. Being able to do things that don't go against my conscience.
Recognition. The praise I get for doing a good job.
Responsibility. The freedom to use my own judgment.
Security. The way my job provides for steady employment.
Social service. The chance to do things for other people.
Social status. The chance to be "somebody" in the community.
Supervision–human relations. The way my boss handles his men.
Supervision–technical. The competence of my supervisor in making decisions.
Variety. The chance to do different things from time to time.
Working conditions. The working conditions.

The 20 MSQ factors reflected in Table 6 were identified and defined by a review of the job satisfaction literature. The separate scores provided by the MSQ, together with the extensive program of research supporting its validity indicate that the MSQ is one of the most useful inventories currently available.

IV. INITIAL DEVELOPMENT OF THE OCCUPATIONAL ATTITUDE INVENTORY

The preceding sections discussed a conceptual framework and provided a selective literature review considered necessary to put the study in a proper context. This section is concerned with the central purpose of the present report, which is a detailed description of the initial development of the Air Force OAI. Inventory development involved identification and definition of the attitude dimensions (i.e., facets) to be measured, writing items to measure the attitude content of each dimension, item review and revision, selection of a rating scale, and other details concerned with preparation of an inventory booklet suitable for actual administration to airmen.

Identification and Definition of Attitude Content Areas

The approach taken in the development of the OAI was similar to that of the MSQ. Based on a review of the literature, a preliminary list of attitude content areas, or facets of satisfaction, was compiled. This compilation made considerable use of the MSQ, but further effort was made to incorporate and integrate inputs from all the studies cited. An amalgamation of the facets, dimensions, or factors from six of the studies is presented in Table 7. The descriptive labels represent the present authors' interpretation of the dimension when inputs from several sources were combined. Facets are listed in descending order of frequency of occurrence in the six studies. For example, Work Itself was most frequent, followed by Pay and Compensation. Additionally, some factors from the various studies were considered applicable to two or more of the dimensions listed in Table 7.

Table 7. Composite Listing of Potential Dimensions of Satisfaction Taken from Six Studies[a]

Tentative Label of Dimension	Frequency[b]
Work Itself or Intrinsic Job Satisfaction	9
Pay, Compensation, Benefits	6
Job-Work Demands. Work Load.	5
Co-workers and Associates	5
Social Status or Prestige	5
Security	5
Pride, Identification, Relations with Company	5
Future Opportunity, Advancement, Self-fulfillment	4
Anxiety, Pressure, Obstacles	4
Supervisor-Employee Relations	4
Independence and Creativity	3
Responsibility, Participation in Decision Making	3
Growth, Development, and Progress	3
Communication and Being Informed	3
Recognition and Self-esteem	3
Working Conditions and Physical Surroundings	2
Competency of Supervisor	2
Helping Others	2
Confidence in Management and Company	2
Exert Control over Other	2
Effective Management Policy and Procedure	1
Evaluation	1
Concern for Individuals	1
Development of Friendship	1

[a]Ash (1954); Hinrichs (1968); Johnson (1955); Porter (1961); Roach (1958); and Weiss et al., (1967).

[b]Frequency with which the dimension as labeled above occurred across the six studies. Some dimensions from the studies were applicable to two or more labels.

The listing of 24 potential dimensions in Table 7 represented a point of departure for the present study. From this rough estimate or starting point, further study of the 24 labels was undertaken to identify multiple content areas (e.g., Independence and Creativity). A list of additional content areas evolved, as an expansion over the listing in Table 7. Each of the content areas in this expanded list was then briefly defined and the list reviewed by other behavioral scientists familiar with the military work environment. This list (Appendix A) included 37 facets of satisfaction covering the domain of attitudes measured by previous civilian research literature and other content areas believed related to military jobs, although possibly applicable to civilian jobs. Two aspects of satisfaction considered more applicable to military than civilian jobs, and not found in civilian studies reviewed, were satisfaction with physical safety and satisfaction with assignment locality.

Item Writing

To obtain reasonable assurance that the entire domain of attitudes represented by the various facets or categories was adequately covered, preparation of an extensive item pool was considered essential. After selection of the 37 content areas, specific items were then written within each area. Although there was no rigid guideline, the goal was to obtain approximately 10 items per area. Three behavioral scientists participated in the item writing which produced an original item pool of 440 items. The ten items per area were assumed sufficient to give a reasonable coverage of the content of each of the 37 categories.

Category and Item Review

Following preparation of the item pool for the 37 original categories, further processing of the items was accomplished in order to evaluate how well judges would agree on item-category matches, to check item ambiguity, and to further refine and amplify the definitions of the categories. The strategy at this point, in the development of the inventory, was the systematic application of logic to gain assurance of adequate item coverage and agreement, rather than the use of statistical procedures to refine items or reduce any redundancy.

In order to investigate the wording and clarity of the items, six behavioral scientists served as judges and sorted items into the pre-defined categories listed in Appendix A. Each judge was given a set of 440 cards. Each card contained a single item which the judge was asked to assign to one of the 37 categories. The extent of agreement would be used as an index of item clarity.

Complete agreement from all six judges was obtained on 134 items or 30 percent of the total item pool. For an additional 23 percent (103 items), only one judge disagreed on the category assignment. Sixty-four additional items (15%) were sorted into their original categories by four of the six judges. Thus, reasonable agreement was obtained on a large majority of the items and the judges encountered little difficulty in assigning items to the same categories.

Final Item-Category Selection and Definition

The primary criteria used for final item selection were agreement among judges and minimal redundancy of content. In terms of the latter, the goal of the item selection process was to eliminate as much redundancy as possible, but to keep sufficient items to insure that the occupational attitude domain defined by the 37 original categories and/or any subsequent revisions of these categories was sufficiently covered. Further, as explained in more detail later in the report, redundant items could be excluded during planned statistical analyses to determine dimensionality.

In terms of a guide to final item selection, those items showing the greatest agreement among judges were chosen insofar as possible. When it was necessary to choose an item with lower inter-judge agreement (i.e., less than 4 of 6 judges sorted the item into the same category) in order to tap a unique attitude area, the item was examined for ambiguity and revised as necessary.

The results of the item sorting also provided useful information for the final definition of categories. To determine possible overlap among categories, a matrix of item assignments by category was generated to determine which categories were most similar. Categories frequently assigned the same items were examined and either redefined to make them more distinct or were combined.

As a result of the preceding item and category review, the list of categories was reduced from 37 to 35, and the number of items was reduced from 440 to 348. The revised listing of 35 categories, as redefined, appear in Appendix B.

Comparison of Appendices A and B reflect several differences between the original 37 and revised 35 categories. Of the original set, the categories which appeared to give the most sorting difficulty were numbers 18 (power), 27 (supervision given), and 33 (transient control over others). Since these three categories had certain supervisory functions in common, they were combined into a revised category labeled "Supervisory Duties". This change also had considerable impact on number 5 (Authority). The original category number 23 (Security) involved both job security and physical safety, so this category was separated into two categories (revised numbers 21, Physical Safety, and 22, Economic Security). Original category 14 (Moral Values) was eliminated as a separate facet since many of its items could be subsumed under other categories. While some changes were made for all 35 categories, there were six of the original categories which underwent particularly large redefinition. These original and revised categories, as numbered in Appendixes A and B, along with the short title from Appendix B were: 11/10 (Knowledge of Results); 12/11 (Personal Growth and Development); 15/14 (Optional Social Contact); 21/19 (Required Social Contact); 30/28 (Performance Evaluation); and 31/29 (Job Change).

With regard to item reduction (440 to 348), this was primarily attributable to removal of ambiguous and potentially redundant items, the combining of three categories into the revised Supervisor Duties category, and deletion of a Moral Values category. A listing of the final 348 items selected, as ordered in the final versions of the survey booklet, is given in Appendix C.

The ordering of 330 of the items presented in Appendix C was obtained by distributing the items for 34 of the categories to provide maximum separation of similar items. For example, a dimension (category) consisting of 10 items would have these items spaced approximately 33 items apart. An exception to this guideline however was category 35 (Appendix B), Supervisory Duties. As shown in Appendix C, this category consisted of the last 18 items (number 331-348). This grouping, which was only to be completed by persons who supervised others, permitted nonsupervisory job incumbents to skip the entire set rather than periodically encountering non-applicable items while completing the inventory. Additionally, two identical items, numbers 235 and 306, were included to permit a crude check on the consistency of responses.

A listing of the items (348) relating to each of the 35 categories is given in Appendix D. The number of items per category ranged from a low of 4 items (e.g., Economic Security) to a high of 18 items (e.g., AF Policies), with a median of 9 items. Item numbers refer to the listing in Appendix C. Eight unclassified items were retained in the inventory.

Selection of a Job Satisfaction Rating Scale

The process of selecting a scale involved a number of separate decisions. This process might be broken down into several steps as follows: *(a)* Dimension to be measured, *(b)* Nature of the Dimension - Bipolar or Unipolar, *(c)* Consideration of the neutral point, *(d)* Number of scale intervals, and *(e)* Benchmarks to be used, if any. Each of these points will be discussed along with an explanation of the decision made for the OAI.

Dimension to be Measured. This decision involved a consideration of the possible conceptualizations of occupational attitudes and satisfaction. There have been a number of different approaches in the literature. The Brayfield and Rothe (1951) scale measured agreement and disagreement with various attitude statements. Porter (1961) measured two dimensions of rewards, amount desired, and amount received. From those he inferred satisfaction from the discrepancy between the two measured dimensions. The MSQ (Weiss et al., 1967) asked individuals to indicate directly their level of satisfaction with each item using a five-point rating scale. Since the present approach accepted the general definition of satisfaction proposed by the Theory of Work Adjustment (the framework in which the MSQ was developed), direct measurement of the satisfaction dimensions was the approach considered most appropriate.

Nature of the Dimension. Accepting Satisfaction as the dimension to be measured raises the question of the nature of the dimension. Herzberg (1966) and his associates (Herzberg, Mausner, & Snyderman, 1959; Whitsett & Winslow, 1967) argue that satisfaction and dissatisfaction are separate dimensions. A review of this evidence (Tuttle & Hazel, 1974) concludes that such an assumption is not warranted on the basis of the evidence. Therefore, the present work has proceeded with the assumption that satisfaction-dissatisfaction represent opposite ends of a single bipolar continuum. This conclusion seems justified by the extensive base of empirical data surveyed in a recent review of satisfaction studies by Tuttle and Hazel (1974).

Neutral point. In a recent article, Kaplan (1972) discusses the interpretation of the neutral or zero point on a bipolar scale, which ranges from a negative scale value to a positive value. A person can respond with "0" either because he is truly ambivalent and cannot decide between the two aspects of the dimension being measured or because he is indifferent concerning the attitude being measured. Therefore, a neutral point on such a scale is ambiguous and can only be interpreted in light of other information. Kaplan's (1972) suggestion is to measure separately the two aspects, negative and positive, of the dimension. Although this approach would have some advantages in terms of interpretability, its cost in terms of increased administration and analysis time would be prohibitive in the present situation.

Another approach to the problem is to eliminate the neutral point by having an even number of steps in the scale. This approach assumes that individuals can be forced out of the neutral point in a reliable way (Nunnally, 1967). In addition, as Nunnally (1967) points out, elimination of the neutral point helps control for response style in that there may be individual differences in the tendency to take the mid-point of a scale, and this tendency might not relate to the attitude being measured. Thus, it would be desirable to control for such a response style. On the basis of the evidence from Kaplan (1972) concerning the problem of interpretability, and Nunnally (1967) indicating that individuals who mark the neutral point can be reliably differentiated on the attitude in question, the present approach chose to have an even number of scale intervals, thereby omitting the zero point.

Number of Scale Intervals. A general guideline for determining the number of scale steps is that it is better to have more rather than few (Nunnally, 1967). This is based on evidence relating to the increase in reliability as a function of the number of steps. This function increases rapidly up to about seven steps, more slowly to 11 steps, and then very gradually to about 20 steps. Based on this phenomenon the decision was made to construct a scale with eight intervals.

Anchor Points. The scale constructed was anchored at each step by numbers ranging from 1 to 8 and by verbal definitions ranging from Extremely Dissatisfied to Extremely Satisfied. This decision was reached following consideration of data presented by the Work Adjustment Project relating to the development of the MSQ (Weiss et al., 1967).

The original version of the MSQ used a five-point scale with the anchors labeled Very Dissatisfied, Dissatisfied, Neutral, Satisfied, and Very Satisfied. When this was administered to a civilian population it was apparent that individuals used only the positive end of the scale. The researchers then modified the scale, by using the following anchor terms: Not Satisfied, Only Slightly Satisfied, Satisfied, Very Satisfied, and Extremely Satisfied. Administration of the revised version demonstrated that the scale change brought the mean scores down to about the mid-point of the scale range, and made the rating distribution more symmetrical (Weiss et al., 1967).

This evidence argues against symmetrical scales with equal numbers of positive and negative anchors. It suggests that increasing the graduation of positively worded statements increases the discrimination power of the scale. However, this evidence, although compelling, was based on a civilian population. There are some reasons to predict that military populations may respond differently, both with regard to variability and expression of dissatisfaction. For example, Gould (1972) investigated airmen job attitudes with 7-point symmetrical and non-symmetrical scales and found that respondents were not reluctant to use extreme ends of either of these rating scales. Another study (Tuttle, Brockhaus, & Hazel, 1974) concerning airmen location assignment preferences which used an 18-point scale (-9 to +9) reflected considerable use of both positive and negative extreme scale values.

The rationale for predicting different results from a military population was based on previous experience with rating scales and a consideration of the implications of airmen stating dissatisfaction. For civilians, expressions of dissatisfaction are in many cases admissions that the individual made a bad job choice. Since civilians "select" their job at least to some degree, the fact that one is unhappy is a reflection on the choice he made. In addition, the possibility that one has more job selection options in civilian life makes it more likely that he will choose a job which provides at least a minimum level of satisfaction. If this is not the case, the person is free to leave, other constraints not withstanding.

In the military, at least prior to the end of the draft, the situation was different. Even though all individuals in the Air Force are "volunteers", many were draft motivated (Vitola & Valentine, 1972). Thus, for a sizeable portion of the current airmen force, it is not until an individual elects to reenlist that he can be classified as a true volunteer. As far as job assignments are concerned, the individual states his preferences but is not always assigned to a job of his chosing, although more progress is being made toward that goal. As a result, past surveys have shown (e.g., Gould, 1972) individuals in the military do not show a reluctance to report strong dissatisfaction. One explanation might be that it is easier to blame the system for malassigning the individual, and therefore reporting dissatisfaction does not reflect on the individual's prior decision. Recent military emphasis on "communication" or "tell it like it is" programs may also contribute to free expressions of attitudes.

The previous line of reasoning led to the present decision to settle on an 8-point scale with four positive and four negative statements. With this approach, even if individuals exhibit the tendancies demonstrated in research with the MSQ, there will be four positive steps on the scale which should provide sufficient discrimination among levels of satisfaction. The eight points written for the OAI scale and the instructions for its administration with the 348 specific items are given in Appendix C (Section II).

Description of the Completed Occupational Attitude Inventory

While the present report has concentrated primarily on the development and selection of items and categories for the OAI, this report would appear incomplete unless some additional information was provided describing the entire survey booklet. In brief, the final form of the survey consisted of two major sections which were: (I) Life History Information, and (II) Occupational Attitude Information.

The general administration instructions (Appendix C) offer an overview of the two sections. The Life History Information section consisted of certain personal identification and work assignment information (e.g., grade, DAFSC), measures of career intent and overall job satisfaction, and 55 questions concerning personal characteristics (e.g., marital status), preference (e.g., sports and leisure activities), and certain service related opinions (e.g., wife's attitude).

Section II consisted of two parts. Part A, Specific Aspects of the Job, is presented in its entirety in Appendix C, except for spaces on the right side of the items to write response using the 8-point scale. Part B, entitled General Aspects of the Job, consisted of the 34 revised categories (facets) as shown in Appendix B (number 35 not included). The 8-point scale described previously was also used to obtain ratings on these general dimensions. An additional page for write-in comments was provided at the end of the booklet.

V. PLANNED ACTIONS AND FUTURE USES OF THE OCCUPATIONAL ATTITUDE INVENTORY[1]

Although some indication of the overall strategy to develop and evaluate the OAI was briefly outlined in preceding sections of this report, more explicit and detailed information appears desirable in order to show the continuity between present and future efforts with the inventory. Consequently, a description is given of planned analyses which will eventually result in an OAI appropriate for operational use.

The next phase in the development of the OAI, aimed at operational implementation, will involve administration of the inventory to a representative sample of Air Force personnel. Analyses of this data will focus on the 348 items within the 35 categories. The primary purpose of this survey administration and analyses will be to empirically determine the dimensions of job satisfaction in the Air Force, and reduce the number of items to a minimum, or parsimonious, subset required to measure the dimensions identified.

A variety of statistical analyses will be used to analyze the obtained data. Factor, regression, and cluster analyses, hierarchical grouping (Bottenberg & Christal, 1968), profile analysis, and various modifications of these procedures are under consideration. Such analyses should help to verify or validate the hypothesized facets or dimensions identified in the initial construction of the inventory. Further, the 348 items in the developmental version of the inventory intentionally exceed the practical limits for an operational inventory. Many of the items were presumed to measure only slightly different variations of similar aspects of the work environment, as well as different levels of specificity of a certain facet. Therefore, the

[1] This section may be more properly described as in-progress and planned actions. At the time of writing the manuscripts, using the booklet developed, data has been collected from about 3,100 airmen and various descriptive, inferential, and regression analyses have been initiated (e.g., factor analysis and item selection programs).

analyses should serve in the reduction of the full set of attitude items to a minimum subset of items which accounts for the variance within the job attitude domain measured by all 348 items. The process of reducing inventory length and item redundance in the absence of specific external criteria is complex and, thus, will be treated in later reports.

While an optimal job satisfaction measurement instrument would be one applicable for use in all Air Force specialties, and such is the view taken in the present effort, attention to certain cautions in such an approach seems warranted. In a study by Gould (1972) examining expressed satisfaction in 97 airmen career ladders, considerable between and within ladder differences were observed. The implication of this finding with regard to an "all-specialties" attitude measurement device is that widely varying facets of job attitude are operating within and between specialties. This will require a large number of specific items for adequate facet identification. Many of the specific work environment factors effecting job attitudes may apply only to selected specialties. Therefore, ability to reduce the extensive number of specific items originally proposed to a small subset of items may be somewhat limited in order to cover the entire domain of the many dimensions of job satisfaction for Air Force personnel.

In addition to the analyses of principal interest (i.e., validation of dimensions and item reduction), another series of descriptive and regression analyses warrants consideration. This series will primarily be concerned with data obtained from the Life History Information (Section I) and General Aspects of the Job (Section II, Part B) portions of the inventory booklet. For example, Section I contained certain career intent and overall job satisfaction measures, along with numerous personal, background, work assignment, preferences, and service related type questions. Section II, Part B consisted of certain tentatively identified general aspects of satisfaction. This information may be useful with regard to weighting or combining predictors of overall job satisfaction or career intent measures, as well as for comparative analyses (e.g., differences in activity preferences for various occupational groups or satisfied/dissatisfied airmen).

In a preceding section of this report, four goals of the long range satisfaction research program were stated. They were: (1) to determine the important facets of job satisfaction for Air Force personnel, (2) to examine the relationship between job satisfaction and career decisions, (3) to identify the characteristics of jobs and assignments which produce satisfaction and dissatisfaction, and (4) to recommend job and policy changes which will positively affect job satisfaction. As explained previously, refinement, and validation of the OAI fall within the scope of the first goal of the long-range Air Force job satisfaction research program. After the two objectives involving the OAI development are achieved (i.e., validation of the dimensions and reduction of items suitable for an operational inventory) the second major objective of the long-range program can then be undertaken.

In order to achieve this second goal (i.e., determining the relationship between validated dimensions of job satisfaction and career decisions in various airmen career fields) several necessary steps have been identified. As currently envisioned, the approach to be followed will involve the determination of the importance of each aspect, at an item level of specificity, to career decisions, in various occupational fields. This will require the development of some form of an importance-possibility of attainment assessment procedure. The device developed will then be administered to a large representative sample of Air Force personnel. The information obtained can be used to determine the importance or influence of the various dimensions in predicting career decisions. From a pragmatic view, the outcome of the attempt to determine the relationship between dimensions and career decisions will be the crucial test of this endeavor. Further reports in this series will address these research activities in more detail.

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APPENDIX A:
INITIAL LIST OF 37 CATEGORIES FOR ITEM SORTING

1. *Achievement* - The opportunity provided by the job for one to obtain feelings of accomplishment.
2. *Activity* - The opportunity to stay busy on the job. Being able to avoid periods of involuntary inactivity.
3. *Air Force and Unit Policies and Practices* - Miscellaneous Air Force and unit policies as they effect the individual motivation to perform or remain in his position.
4. *Assignment Locality* - Desirability or undesirability of the current assignment.
5. *Authority* - The opportunity to control or direct the work activities of others.
6. *Co-workers* - The opportunity for meaningful social interaction in one's position. Includes such factors as the presence and compatibility of co-workers.
7. *Creativity* - The opportunity to apply one's initiative, ingenuity, and creativity to the work situation to produce new and original products or ideas. Also included is the opportunity to apply one's own ideas.
8. *Importance* - The value of one's work to the Air Force. A job can be defined as important if one's failure to perform satisfactorily would hamper the accomplishment of an Air Force mission.
9. *Independence* - The opportunity to plan, direct, and carry out one's own activities rather than be directed by others.
10. *Interest* - The opportunity to perform types of work activities which one likes to perform.
11. *Feedback* - The opportunity for the incumbent to know how well he is performing on the basis of information received during or immediately after task performance. Supervisor feedback is *not* included. Included is information which is in some way connected with the task itself.
12. *Growth (Job Enlargement)* - The opportunity to expand the scope as one's interests and develop his abilities. The chance to maintain the challenge of the job by affecting the scope or depth of one's work activities.
13. *Job Design* - Characteristics of the organization of tasks in a job. Includes such factors as the efficiency of task organization in terms of an incumbents' time, the extent to which sequential tasks are antagonistic, as well as the number, type, and sequence of tasks and the work pace.
14. *Moral Values* - The opportunity to perform work which does not conflict with one's moral of ethical principles.
15. *Optional Interaction* - The opportunity one has to choose his associates, as well as the opportunity to schedule or affect the time, plan, and frequency of social interaction.
16. *Pay and Benefits* - The level of pay and the attractiveness of Air Force benefits.
17. *Physical Work Environment* - Characteristics of one's immediate work area to include lighting, noise, safety, cleanliness, attractiveness, etc.
18. *Power* - The opportunity to exert influence over others by virtue of one's position, or special knowledge or expertise.
19. *Promotion Opportunity* - The operation of the Air Force promotion system and the perceived opportunities for promotion.
20. *Recognition* - The opportunity to obtain explicit acknowledgement or appreciation for one's work activities. This may come from within or outside the Air Force, but is acknowledgement based on the work done rather than the position occupied.

21. *Required Interaction* - The extent to which one's work activities require some sort of interpersonal contact with others.

22. *Responsibility* - The opportunity to use one's own judgement, and to be accountable for the effects of one's decisions and actions.

23. *Security* - The opportunity to be assured of the security of one's job as well as the feeling of security from physical danger.

24. *Service to Others* - The opportunity to engage in work activities which directly or indirectly improve the well-being of others. The opportunity to feel that the work one does is of benefit to others.

25. *Social Status* - The opportunity to obtain social standing or prestige as a result of the position or job which one occupies. The social status may be either from within or outside the Air Force.

26. *Sufficiency of Training* - The opportunity to receive adequate training to do one's assigned job and the provision made by the Air Force to insure that individual's receive needed training to remain current in their job.

27. *Supervision Given* - The opportunity to supervise the work of others.

28. *Supervision Received* - Human Relations - The competence displayed by one's supervisor in dealing with human or people-type situations in the job.

29. *Supervision Received - Technical* - The competence displayed by one's supervisor in dealing with technical problems presented by the job.

30. *Supervisory Feedback* - The frequency, timeliness, and accuracy of the performance information one receives from his supervisor.

31. *Task Stability* - The extent to which the elements of the job (i.e., tasks, tools, procedures, etc.) remain stable over time as opposed to jobs in which the work elements are rapidly changing.

32. *Tools, Equipment, and Supplies* - The availability when needed of adequate tools, equipment, and supplies, which are in serviceable condition.

33. *Transient Control Over Others* - The opportunity to exert control over others in temporary or transient relationships by virtue of services or information one dispenses or through enforcement of rules or regulations.

34. *Utilization* - The opportunity to do work which makes use of one's abilities and training.

35. *Value of Experience* - The opportunity to obtain Air Force skills which will be of future value to the Air Force and/or the civilian labor market. Being able to avoid developing skills which will rapidly become obsolete.

36. *Variety* - The opportunity to perform a number of different work activities as opposed to performing a few activities repeatedly.

37. *Work Schedule* - Characteristics of the work schedule such as day or night work, chance to vary work hours, consistency of the work schedule, etc.

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APPENDIX B:
REVISED LIST OF 35 ATTITUDE CATEGORIES

1. *Achievement* - Feelings of accomplishment derived from your job performance. The pride and pleasure associated with a job well done.
2. *Activity* - The opportunity to have sufficient work to keep you busy during required duty hours. Being able to avoid slack periods and periods of involuntary inactivity. (Includes physical and/or mental work activity)
3. *Air Force and Unit Policies and Practices* - The effects of Air Force, Major Command, or local unit policies on you and your motivation to perform or remain in your position.
4. *Assignment Locality* - The desirability of your current assignment locality. Includes characteristics of the base as well as characteristics of the surrounding community.
5. *Authority* - The amount of power you have to influence or control the activities of others. This power may be due to your position in the chain of command, power inherent in the performance of your duties (i.e., security policeman), or power due to special knowledge or expertise.
6. *Co-workers* - The compatibility of your co-workers. Includes characteristics of your co-workers such as how friendly, cooperative, competent, and sociable they are.
7. *Creativity* - The chance to apply your initiative, ingenuity, and creative talent to the work situation to produce new or original products, ideas, or solutions to problems.
8. *Importance* - The feeling that your work is valuable to the Air Force. Work could be perceived as important if the failure to perform satisfactorily could, in some way, affect the accomplishment of an Air Force mission.
9. *Independence* - The chance to plan and carry out your own work activities rather than be directed by others. The chance to work with minimal supervision, and to exercise considerable autonomy in planning and implementing your work.
10. *Interest* - The chance to perform work activities which are compatible with your preferences or interests. The chance to do work which you find pleasurable for its own sake.
11. *Knowledge of Results* - The chance to see or determine the results of your work. Having the opportunity to determine the contribution you make to mission accomplishment.
12. *Personal Growth and Development* - The opportunity for self-fulfillment in the job. The chance to "grow" in the job, by developing new interests and skills.
13. *Job Design* - The manner in which your tasks fit together in your job. Includes the efficiency of task organization, whether tasks are performed in a logical sequence, time pressures of the job, number of tasks performed, etc.
14. *Optional Social Contact* - The opportunity to choose the co-workers with whom you have close contact, either on the job or off the job. The amount of control you have over the time, place, and frequency of social interaction.
15. *Pay and Benefits* - The level of pay and the desirability of Air Force benefits. Included are incentive pay, retirement, medical care, BX, commissary privileges, etc.
16. *Physical Work Environment* - Characteristics of your immediate work area. Included are such characteristics as lighting, noise level, cleanliness, attractiveness, amount of work space, temperature, humidity, location, etc.
17. *Promotion Opportunity* - The operation of the Air Force promotion system. Includes your opportunity for promotion, the criteria for promotion, feelings that promotions are rewards for good work, etc.

18. *Recognition* - The opportunity to obtain clear recognition or appreciation for your work activities. This acknowledgement may come from sources inside the Air Force (i.e., supervisor, unit commander, etc.) or outside the Air Force (community, family, etc.). Included is recognition based on the work performed rather than the position occupied.

19. *Required Social Contact* - The amount of contact with others required to perform your work activities or to fulfill the social obligations of your position. Included is face to face contact as well as contact through written and oral communication.

20. *Responsibility* - The amount of responsibility you have for your actions, decisions, and their consequences. Includes responsibility for the welfare of people, for accomplishment of a mission, for tools or equipment and other property, or for financial assets.

21. *Physical Safety* - The protection you have against bodily injury or harm connected with your job. The threat of injury may be due to the type of equipment used, weapon system worked on, handling or dealing with explosives, as well as danger from combat activity.

22. *Economic Security* - The feeling that your Air Force job is secure and will continue even if the general economic situation becomes poor. The chance to feel that your basic security needs, (food, clothing, shelter, medical care, etc.) will be met.

23. *Service to Others* - The opportunity to engage in work activities which directly or indirectly improve the well being of others. The opportunity to feel that the work you do is of benefit to others.

24. *Social Status* - The social standing or prestige which results from your position or job. This refers to social status both within and outside the Air Force.

25. *Sufficiency of Training* - The opportunity to receive adequate training to do your assigned job. Also includes the feeling that you will be able to obtain additional training as needed to remain current on the job.

26. *Supervision Received - Human Relations* - The ability of your boss or supervisor to handle human or social situations on the job. The amount of concern displayed by your supervisor for the welfare of his men.

27. *Supervision Received - Technical* - The competence displayed by your supervisor in dealing with technical problems encountered in the job. Your supervisor's ability to develop technical skills in his men.

28. *Performance Evaluation* - The frequency, timeliness, accuracy and fairness of the performance evaluation received from your supervisor. The extent to which your supervisor lets you know where you stand.

29. *Job Change* - The frequency with which the content of your job changes as a result of technological developments. The rate or pace of changes in tasks performed, tools used, procedures used, and their impact on the worker. Amount of time and effort required to remain current.

30. *Tools, Equipment, and Supplies* - The availability, when needed, of adequate tools, equipment, and supplies. The condition of tools and equipment and the ease with which malfunctions are handled.

31. *Utilization* - The extent to which your work makes use of your abilities, training, and experience.

32. *Value of Experience* - The opportunity to obtain Air Force skills which will be of future value to the Air Force and the civilian labor market. Being able to feel that the skills you obtain will not become obsolete.

33. *Variety* - The opportunity to have variety in the content of your work. Variety may result from working with unique problems, working with different people, working in a new location, or from having a number of different tasks to perform.

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34. *Work Schedule* - The hours that you are required to work. Includes the way your work is scheduled as well as the impact of your work schedule on your private life.

35. *Supervisory Duties* - Defined in terms of the specific items involved. See heading and items 331-348 in Appendix C. Number 35 not included in Section II, Part B, final version of inventory booklet.

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APPENDIX C:
GENERAL ADMINISTRATION, SPECIFIC JOB ASPECTS INSTRUCTIONS, AND OCCUPATIONAL ATTITUDE INVENTORY ITEM POOL

INTRODUCTION

How do you feel about your job?

The answer to this question is becoming increasingly important to the Air Force. In its effort to attract and retain top quality personnel, the Air Force must strive to assure that as many of its personnel as possible are satisfied with their job.

Recent surveys have indicated that many Air Force personnel report that they feel their jobs are interesting and make use of their talents and training. However, a substantial number report lack of interest and low feelings of utilization.

The purpose of this inventory is to investigate thoroughly the feelings of Air Force personnel about a wide range of factors. Most of these factors are job-related, however, some are related to Air Force life in general. Once the feelings of a large number of individuals are obtained, these will be analyzed in connection with other information to be collected to determine: (1) causes of dissatisfaction, and (2) what can be done to increase job satisfaction.

The inventory is composed of two sections. Section I - *Life History Information* - requests information about your background, interests, and family. The purpose of this section is to obtain some information which will assist the interpretation of your responses in Section II. Section II - *Occupational Attitude Information* - includes statements concerning various aspects of your job and Air Force life. You are asked to respond to all the items in each section.

It is extremely important that the true feelings of individuals be obtained. Your responses will in no way become a part of your military record. The information you are asked to provide will be used for research purposes only.

Inclosed you will find a self-addressed envelope to be used to return the inventory. When you have answered every item, place the booklet in the brown manila envelope and seal it. Then mail the completed inventory to the address indicated.

SECTION II. OCCUPATIONAL ATTITUDE INFORMATION

Part A. Specific Aspects of the Job

This part of the inventory asks you to tell how you feel about specific aspects of your present job. On the following pages are a number of statements. While some of these statements may appear similar to each other no two items are identical. The purpose of this section is to determine which items have similar meanings to Air Force personnel.

Read each statement carefully. Then decide for yourself whether you are satisfied or dissatisfied with that aspect of your present job. Indicate "how satisfied" or "how dissatisfied" by choosing one of the statements below, which best represents your feelings, and writing its number in the answer space.

Write 1 if you are EXTREMELY DISSATISFIED
Write 2 if you are VERY DISSATISFIED
Write 3 if you are MODERATELY DISSATISFIED
Write 4 if you are SLIGHTLY DISSATISFIED
Write 5 if you are SLIGHTLY SATISFIED
Write 6 if you are MODERATELY SATISFIED
Write 7 if you are VERY SATISFIED
Write 8 if you are EXTREMELY SATISFIED

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Do this for *all* statements. Answer *every* item.

Please work quickly and do not go back to previous items.

Give a true picture of your feelings about your *present job.*

OCCUPATION ATTITUDE INVENTORY ITEM POOL

1. The chance to feel you are accomplishing something.
2. The Air Force's efforts to remove irritants and sources of dissatisfaction.
3. The geographical area to which you are assigned.
4. The moral standards of your co-workers.
5. The contribution your work makes to the national defense.
6. Enjoyment you get from doing your job.
7. The contribution your job makes to your vocational development.
8. The opportunity to choose your close associates on the job.
9. Personal conveniences provided in the work area.
10. The chance to get ahead on the job.
11. The amount of social contact required by the job.
12. The attention given to safety in your work area.
13. The respect that results from your rank and job.
14. The extent to which your supervisor brings out the best in his men.
15. Your supervisor's knowledge of the way your job is done.
16. The need for frequent retraining within your specialty.
17. The opportunity to develop your skills for a lifetime occupation.
18. Chance to vary your work schedule when required to conduct personal business.
19. The chance to complete work that you start.
20. The adequacy of the information provided you on the Air Force promotion system.
21. The attitudes of civilians around your base toward the Air Force.
22. The opportunity to make and implement new suggestions.
23. The chance to plan your own work.
24. The chance to know for yourself when you do a good job.
25. The efficiency with which your work time is allocated.
26. The opportunity to meet new people.
27. The noise level of your work environment.
28. Recognition for the quality of work that you do.
29. The chance to be responsible for your own work.
30. The chance to improve the welfare of others.
31. Your training in where and how to get needed technical information.
32. Your personal relationship with your supervisor.
33. The accuracy of the information you receive about your performance.
34. The priority given to your requests for supplies.
35. The demand for your job obtained skills in the civilian job market.
36. The regularity of your work schedule.
37. The pace of your work.
38. The amount of "red tape" connected with your work.
39. The chance for meaningful social contact in your work.
40. The chance to try different methods on your own.
41. Your level of interest in this job compared to others you have held.
42. The ability of your job to provide new challenges.

43. The chance to tell others what to do.
44. The amount of money you can make in the Air Force.
45. The opportunity for promotions in your career field.
46. The amount of time you spend in job-required communication.
47. The control your job gives you over material.
48. The opportunity to be of service to others.
49. The availability of useful self-help training materials.
50. The extent to which your supervisor keeps you informed.
51. The rate of change in the content of your work.
52. The way your job uses your abilities.
53. Sometimes having new and different situations to handle.
54. Opportunity to point to your accomplishments.
55. The way your unit handles required General Military Training and Physical Fitness testing.
56. The educational opportunities provided by the surrounding community.
57. The amount of pride your co-workers have in their work.
58. The chance to make decisions for yourself.
59. The opportunity to see the results of your work.
60. The way the tasks in your job are organized.
61. The opportunity to have some control over the time spent with others.
62. Amount of work space available.
63. The recognition you receive from your family for the work you do.
64. The chance to feel responsible for a total unit of work.
65. The security of your job.
66. The opportunity to meet and work with important people.
67. The respect your supervisor shows for you as a person.
68. The amount of time your supervisor takes to make a decision.
69. The promptness with which equipment malfunctions are handled.
70. The amount of your training that can be applied to a civilian occupation.
71. Your work schedule compared to the schedule of a typical civilian job.
72. Chance to engage in physical activity.
73. Travel (PCS) opportunities for personnel in your specialty.
74. The BX and Commissary facilities at your base.
75. The amount of creativity required by your job.
76. The amount of freedom you have on the job.
77. Chance to do a "whole piece of work".
78. The difficulty level of your job.
79. Your pay compared to what you could make on the outside.
80. The amount of exposure to unpleasant chemicals or gases.
81. The recognition your unit gives for good performance.
82. The chance to take charge of a work goal.
83. The chance to perform tasks which benefit peoples lives.
84. Your chance of getting additional training compared to others in your field.
85. The fairness with which your supervisor assigns work.
86. Opportunity to find out from your supervisor whether you are doing poorly or well.
87. The ability demands of your job.
88. Chance to work in different types of situations.
89. The number of times your work schedule has interfered with personal plans.
90. Your unit's policy for assigning additional duties.
91. The cost of living in the area to which you are assigned.
92. The friendliness of your co-workers.
93. Opportunity to make a clear contribution to the mission of your unit.
94. Amount of interesting work you get to do.

95. The challenge provided by your job.
96. The chance to do work that does not bother your conscience.
97. The protection provided by the Air Force Life Insurance program.
98. Your chance for promotion compared to others doing similar work.
99. The closeness with which you have to work with others.
100. Your physical safety on the job.
101. Your social position in the Air Force as a result of your job.
102. The instructional methods used in your training.
103. The way your supervisor handles technical problems.
104. The pace of new developments in your field.
105. Chance to take advantage of your abilities.
106. Opportunity to get away from the routine and do something new.
107. The opportunity to have pride in the work that you do.
108. The way your preferences are considered by your unit.
109. The similarity between your assignment and your assignment preference.
110. Your amount of effort compared to the effort of your co-workers.
111. The importance attached to your job by your co-workers.
112. Chance to do the type of work you have always wanted to do.
113. The chance to gain new knowledges and skills.
114. The chance to work with different people if you want to.
115. Adequacy of lighting in the immediate work area.
116. The opportunity to have the results of your work noticed by others.
117. The amount of cooperation required.
118. The feeling of economic security you have in the Air Force.
119. The status you have in the civilian community because of your job.
120. The way your supervisor handles personal problems.
121. The ability of your supervisor to make decisions.
122. The availability of tools and equipment needed to do the job.
123. The future potential for civilian work of the same type you are now doing.
124. The flexibility of your work schedule.
125. Opportunity to always have something to do.
126. The frequency of reassignment for airmen in your specialty.
127. The facilities provided by the base.
128. The chance to "think up" new ways of doing things.
129. The chance to have a say in what you do.
130. Chance to do a job from start to finish.
131. The physical demands of your job.
132. Your fringe benefits compared to fringe benefits offered by a civilian job.
133. The cleanliness of your work environment.
134. The chance to be recognized for outstanding performance.
135. The opportunity to accept responsibility for getting a job done.
136. The chance to help people.
137. The opportunity to receive additional training when necessary to meet new job dem
138. The way your supervisor handles disciplinary problems.
139. Your supervisor's fairness in rating subordinates.
140. The opportunity to use up-to-date equipment.
141. The chance to receive civilian educational credit for your military job training.
142. The chance to schedule your time-off.
143. The amount of work you have to do.
144. The frequency of overseas or remote assignments for your specialty.
145. The "know-how" of the people you work with.
146. The benefit derived by the Air Force from you work.

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147. The interest you have in going to work each day.
148. The opportunity for personal growth and development in your job.
149. The opportunity to perform activities which ate morally acceptable.
150. The advantages provided by the commissary and BX.
151. The chance to be promoted on the basis of ability.
152. The amount of communication required.
153. The level of danger in your job.
154. The prestige that goes with your position.
155. The competence of the instructors you have encountered.
156. The amount of respect your supervisor shows for your ability.
157. The amount of work time spent learning about new procedures or equipment.
158. The chance to utilize your civilian education and training.
159. The opportunity to "wear several hats".
160. The feeling that your efforts lead to results.
161. The adequacy of information you receive about unit policies.
162. The distance to your home of record.
163. The chance to try new ideas.
164. The chance to participate in setting your work goals.
165. The chance to see how your effort pays off.
166. The time allotted for different tasks.
167. The chance to work by yourself whenever you feel like it.
168. Normal temperature of your work environment.
169. The recognition co-workers give to your work.
170. The chance to be held accountable for your work.
171. Your chances of remaining on active duty until retirement if you want to.
172. The status given a military man by the civilian community.
173. The leadership qualities of your supervisor.
174. The information you get from your supervisor about your work performance.
175. The amount of time you spend waiting for needed tools, supplies or equipment.
176. The future value of your skill in the civilian labor market.
177. The time of day that you go to work.
178. The extent to which you can stay mentally active on the job.
179. The amount of leave time you are allowed.
180. The on-base housing.
181. The opportunity to use your imagination to solve problems.
182. The opportunity to decide for yourself how to accomplish your job.
183. The chance to broaden the scope of your activities.
184. Amount of effort required to do your work.
185. The opportunity for you or your family to travel at military rates.
186. Convenience of the location of the work area to mess facilities and living quarters.
187. The amount of required coordination with others.
188. The extent to which you take the blame for others mistakes.
189. The importance of your job performance to the welfare of others.
190. The chance to be trained in the use of modern equipment.
191. The chance to make your grievances known.
192. Your supervisor's skill in writing performance evaluations.
193. Chance to do the kind of work you do best.
194. The amount of variety in your work.
195. The amount of non-scheduled work you have to do.
196. The leave policy of your unit.
197. The size of your base.
198. The opportunity to work with people who know their jobs.

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199. The importance of your work.
200. Opportunity to develop new interests.
201. The chance to realize your vocational potential.
202. The chance to do things which do not violate your sense of right and wrong.
203. The standard of living which your income provides.
204. The relationship between your job performance and chances for promotion.
205. The amount of dependence on others to get the job done.
206. The hazards involved in doing your job.
207. The pride your family has in your work.
208. The similarity between your training and the requirements of the job.
209. Your supervisor's knowledge of your job.
210. The feeling that changes made in your job are usually improvements.
211. Chance to use your military training.
212. The chance to start something else if a task gets monotonous.
213. The feeling of accomplishment you get from your work.
214. The availability of information on Air Force policies and practices.
215. The size of the surrounding community.
216. The chance to work with other people.
217. The importance you feel while doing your job.
218. Amount of pleasure you get from doing your job.
219. The time pressures of your job.
220. The opportunity to associate with people you like.
221. The surroundings in which your job is performed.
222. The chance to receive community recognition for your work.
223. The level of responsibility that goes with your job.
224. The way the Air Force provides for its people.
225. Your prestige in the military community resulting from the type of work you do.
226. The way your supervisor handles his men.
227. The way your supervisor trains his men.
228. The condition of the tools or equipment you use.
229. The chance to acquire valuable skills.
230. The number of hours you work per week.
231. Opportunity to stay busy.
232. The assignment possibilities associated with your career field.
233. The weather at your base.
234. The opportunity for originality in your work.
235. The chance to work at your own pace.
236. Chance to do work with identifiable results.
237. The additional duties associated with your job.
238. The quality of medical care provided by the Air Force.
239. The physical appearance of the work area.
240. The praise you get from your supervisor.
241. The chance to handle a position of trust.
242. The chance to feel that you perform a service to others.
243. The training you have received to perform your current job.
244. The likelihood that your supervisor will back you up.
245. The promptness with which you find out how you are doing.
246. The availability of necessary materiel or supplies.
247. Chance to regularly perform a variety of tasks.
248. The way your working hours are scheduled.
249. The frequency of slack periods on the job.
250. Travel (TDY) opportunities for personnel in your specialty.

251. The "spirit of teamwork" which exists between your co-workers.
252. The importance of your work for the accomplishment of you unit's mission.
253. The similarity between your interests and work activities.
254. The chance to "dig deeper" into work activities which interest you.
255. The chance to avoid situations which violate your religious beliefs.
256. The retirement income you would receive from an Air Force career.
257. The Weighted Airman Promotion System (WAPS).
258. The amount of teamwork required.
259. The chances of being injured or physically harmed on your job.
260. The prestige your family receives as a result of your job.
261. The adequacy of your training for meeting emergency situations.
262. The technical competence of your supervisor.
263. The amount of effort required to keep up with developments in your field.
264. The similarity between the skills you have learned and the job you are doing.
265. Chance to use different types of equipment.
266. The progress you are making toward work objectives.
267. The opportunity provided by the Air Force for self-improvement education.
268. The cultural opportunities provided by the surrounding community.
269. The chance to use your initiative.
270. The amount of freedom you have to decide work methods and procedures.
271. Chance to identify clearly the results of the tasks you perform.
272. The amount of work required by your job compared to other Air Force jobs.
273. The chance to socialize with people whose work is different from yours.
274. The working conditions associated with your job.
275. The opportunity for recognition provided by your job.
276. The amount of responsibility for equipment or supplies.
277. The chance to do work that is beneficial to mankind.
278. The feelings you get from wearing the Air Force uniform.
279. The willingness of your supervisor to listen to his employees.
280. The chance to know where you stand with your supervisor.
281. The extent to which tools and equipment are shared by co-workers.
282. The chance to prepare for your eventual return to civilian life.
283. Effect of your work schedule on your personal life.
284. The opportunity to move around on your job.
285. The amount of paperwork required to do your job.
286. The extent to which those you work with "share the load".
287. The way new ideas are accepted.
288. The chance to pursue interests you have had for a long time.
289. The chance to "grow" in your job.
290. The amount of "dirty-hand" work you do.
291. The benefits provided by the Air Force.
292. Your promotion opportunities in the Air Force compared to those in a civilian occupation.
293. The amount of required telephone communication.
294. The control your job gives you over people.
295. The effects of your work on other people.
296. The scope and type of on-the-job training you are receiving.
297. The availability of your supervisor when you have a problem.
298. The way your supervisor evaluates your work.
299. The similarity between your abilities and the requirements of the job.
300. Opportunity to vary your work methods or procedures.
301. The effect of your work schedule on your favorite recreational activities.
302. The consideration given you as a person by the Air Force.

303. The recreational opportunities provided by the surrounding community.
304. The amount of competition among your co-workers.
305. The value of your work for the Air Force.
306. The chance to work at your own pace.
307. The cost of TDY versus the payment received.
308. The opportunity to take on new responsibilities.
309. The morality of your work.
310. Amount of time you must work in extreme temperatures.
311. Your knowledge of the operation of the Air Force promotion system.
312. The social obligations related to the job you hold.
313. The safety program in your unit.
314. The status your job gives compared to the status you would expect as a civilian.
315. Your organization's OJT training program.
316. The concern your supervisor shows for the welfare of his subordinates.
317. The technical "know-how" of your supervisor.
318. The amount of change in your job compared to other jobs you have held.
319. The extent to which your military pay covers your living expenses.
320. The living and working conditions faced on TDY.
321. The kind of job supervision usually received.
322. The amount of authorized time off for meals.
323. On-base and off-base transportation facilities.
324. The opportunity to get enough sleep during an average 24 hour day.
325. The amount of on the job supervision you receive.
326. The quality of base quarters, barracks, or civilian housing in which you live.
327. The quality of food and availability of eating facilities at your base or location.
328. The opportunity for an off duty job.
329. Your work schedule.
330. The ability of your supervisor to communicate instructions.

For Supervisors Only

The items in this section are applicable only to those who supervise other people as part or all of their job. Respond to these items *only* if you supervise other people. If you *do not* supervise the work of others SKIP TO PAGE 31 (beginning of facets or dimensions ratings). Use the same satisfaction scale.

331. The power you have over others.
332. The number of people that you supervise.
333. The opportunity to supervise the work of others.
334. The chance to organize the efforts of others to accomplish a mission.
335. The chance to show you can supervise the work of others.
336. The authority you have over others.
337. The chance to have people working under your authority.
338. The extent which your job requires you to enforce rules and regulations.
339. The way others respect your authority.
340. The opportunity to evaluate the work of others.
341. The chance to give orders.
342. The chance to be responsible for work done by others.
343. The opportunity to direct the work of others.
344. The chance to take control and run things.
345. The chance to have other people come to you for information and advice.
346. The opportunity to influence how others do their jobs.

347. The amount of paperwork associated with your role as supervisor.
348. The amount of counseling time required to supervise people.

APPENDIX D:

LIST OF 348 ITEMS CORRESPONDING WITH EACH FACET OF SATISFACTION

Facet Name	Number of Items	Items
1. Achievement	7	1, 19, 54, 107, 160, 213, 266
2. Activity	8	37, 72, 125, 143, 178, 231, 249, 284
3. AF and Unit Policies and Practices	18	2, 20, 38, 55, 73, 90, 108, 126, 144, 161, 179, 196, 214, 232, 250, 267, 285, 302
4. Assignment Locality	17	3, 21, 56, 74, 91, 109, 127, 162, 180, 197, 215, 237, 268, 303, 323, 326, 327
5. Authority	4	43, 47, 61, 294
6. Co-workers	9	4, 57, 92, 110, 145, 198, 216, 251, 286
7. Creativity	10	22, 40, 75, 128, 163, 181, 234, 269, 287, 304
8. Importance	8	5, 93, 111, 146, 199, 217, 252, 305
9. Independence	9	23, 58, 76, 129, 164, 182, 235, 270, 306
10. Interest	9	6, 41, 94, 112, 147, 200, 218, 253, 288
11. Knowledge of Results	7	24, 59, 77, 130, 165, 236, 271
12. Personal Growth and Development	9	7, 42, 95, 113, 148, 183, 201, 254, 289
13. Job Design	10	25, 60, 78, 131, 160, 184, 219, 237, 272, 290
14. Optional Social Contact	7	8, 26, 39, 114, 167, 220, 273
15. Pay and Benefits	12	44, 79, 97, 132, 150, 185, 203, 238, 256, 291, 307, 319
16. Physical Work Environment	13	9, 26, 62, 80, 115, 133, 168, 186, 221, 239, 274, 310, 320
17. Promotion Opportunity	8	10, 45, 98, 151, 204, 257, 292, 311
18. Recognition	9	28, 63, 81, 116, 134, 169, 222, 240, 275
19. Required Social Contact	10	11, 46, 99, 117, 152, 187, 205, 258, 293, 312
20. Responsibility	10	29, 64, 82, 135, 170, 188, 223, 241, 276, 308
21. Physical Safety	6	12, 100, 153, 206, 259, 313
22. Economic Security	4	65, 118, 171, 224
23. Service to Others	8	30, 48, 83, 136, 189, 242, 277, 295
24. Social Status	11	13, 66, 101, 119, 154, 172, 207, 225, 260, 278, 314
25. Sufficiency of Training	12	31, 49, 84, 102, 137, 155, 190, 208, 243, 261, 296, 315
26. Supervision Received-Human Relations	15	14, 32, 50, 67, 85, 120, 128, 156, 173, 191, 226, 244, 279, 297, 316

Facet Name		Number of Items	Items
27.	Supervision Recieved-Technical	9	15, 68, 103, 121, 209, 227, 262, 317, 330
28.	Performance Evaluation	8	33, 86, 139, 174, 192, 245, 280, 298
29.	Job Change	7	16, 51, 104, 157, 210, 263, 318
30.	Tools, Equipment, and Supplies	8	34, 69, 122, 140, 175, 228, 246, 281
31.	Utilization	8	52, 87, 105, 158, 193, 211, 264, 299
32.	Value of Experience	8	17, 35, 70, 123, 141, 176, 229, 282
33.	Variety	9	53, 88, 106, 159, 194, 212, 247, 265, 300
34.	Work Schedule	15	18, 36, 71, 89, 124, 142, 177, 195, 230, 248, 283, 301, 322, 324, 329
35.	Supervisory Duties	18	331-348
36.	Unclassified	8	96, 149, 202, 255, 309, 321, 325, 328
	TOTAL	348	

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